Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. *Applicant/Contact name and address*: Richland County Public Works
2140 West Holly St
Sidney, MT 59270

2. *Type of action*: Application for Beneficial Water Use Permit No. 42M 30159885

3. *Water source name*: Groundwater

4. *Location affected by project*: NW Section 32, T23N, R59E, Richland County.

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits*:

The Applicant proposes to divert groundwater by means of a well completed in the Shallow Hydrologic Unit (SHU) of the Yellowstone River valley alluvial deposits. The well is located in NWSWNW Section 32, T23N, R59E, Richland County. The Applicant proposes to divert water from January 1 to December 31 at 250 GPM up to 40.1 AF per year. The purpose is to irrigate 10 acres of grass fields at the Richland County fairground from April 1 to October 31, as well as to use the water for road maintenance, weed spraying and the fire department from January 1 to December 31. The place of use is NW Section 32, T23N, R59E, Richland County.

The DNRC shall issue a water use permit if an applicant proves the criteria in §85-2-311 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:

Montana Department of Natural Resources and Conservation (DNRC)
Montana Department of Environmental Quality website
Montana Department of Fish, Wildlife and Parks
Montana Natural Heritage Program website
USDA Web Soil Survey
National Wetlands Inventory website

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

The Department has shown that the Yellowstone River is hydraulically connected to the proposed well's source aquifer. The Department determined that this groundwater appropriation would deplete a reach of the Yellowstone River, at an average rate of 2.1 AF each month, starting in E2 of Section 3, T22 N, R59E, Richland County. The amount of water to be depleted by the proposed project is both physically and legally available in all months.

The affected reach of the Yellowstone River is not identified as a chronically or periodically dewatered stream by the Montana Department of Fish, Wildlife and Parks. The FWP has a water reservation on this portion of the Yellowstone River that ranges from 2,670 CFS in August to 25,140 CFS in June to maintain instream flow for fisheries.

Determination: This groundwater development is not expected to have significant impacts.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

The Lower Yellowstone River is listed on the 2020 Montana 303(d) list as fully supporting agriculture, drinking water, and primary contact recreation, while not fully supporting aquatic life. Causes of impairment to aquatic life are alternation of riparian vegetation cover, fish passage barrier, sedimentation, total dissolved solids, and chemical level. Probable sources of the impairment are crop production, impacts from hydro flow regulation, rangeland grazing, and streambank modification.

Determination: This groundwater development is not expected to have significant impacts.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

The production well was drilled in November, 2021. Total depth of the well is 120 feet with the static water level at 26.1 feet below the top of casing. Modeling analysis by the Department showed that groundwater is physically available (7,471 AF/year) and legally available (3,899 AF) for appropriation in the amount and during the period of diversion requested by the Applicant. If the proposed appropriation (40.1AF) is approved, 3,859 AF will remain in the aquifer.

The Department also used modeling to predict drawdown in existing wells completed in the SHU source aquifer. Modeling indicated that, after pumping for five years at the proposed schedule, the maximum modeled drawdown would be 0.38 ft at the end of the fifth year.

The Department has also determined that the hydraulically connected surface water of the Yellowstone River is physically and legally available for the quantity (25.2 AF per year) and period of diversion (year-round) in which the depletion will occur.

Based on these findings, there will be no significant impact to the groundwater aquifer or hydraulically connected surface waters.

Determination: This groundwater development is not expected to have significant impacts.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Water will be diverted by an 8-inch well 120 ft deep, with a static water level at 26.1 ft. The well is equipped with a Grundfos 300S300-8 30hp 8-stage submersible pump. Water is conveyed via 6-inch PVC underground pipelines 520-ft long to water the grass fields at night. Water is also conveyed via 3-inch above-ground steel line that runs to two 440-barrel water tanks directly adjacent to the water well. These tanks are used to fill water trucks and trailers for road maintenance, fire department, and weed spraying during the day.

The proposed well and the fairground are 3.2 miles west of the Yellowstone River. The project will not alter stream channel and stream flow, nor impact riparian areas.

Determination: This groundwater development is not expected to have significant impacts.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

According to the Montana Natural Heritage Program website, four animal species listed Endangered occur in Richland County: Whooping Crane, Least Tern, Pallid Sturgeon, and Northern Myotis. Two animal species listed Threatened occur in Richland County: Piping Plover and Yellow-billed Cuckoo. There are no federally-listed plants species within the project area. The four endangered species are described below:

Whooping Crane
The federally endangered Whooping Crane migrate between Canada and Texas. They occasionally cross the eastern portion of Montana, although their main migratory corridor is found to the east in the Dakotas. While the species was close to extinction during the early and mid-1900s, intensive management has helped to begin the recovery process. The species is still

very rare across its range and at risk of extinction. Whooping Crane has a verified occurrence in Richland County.

Least Tern
The Least Tern prefers unvegetated sand-pebble beaches and islands of large reservoirs and rivers in northeastern and southeastern Montana; specifically, the Yellowstone River and the Missouri River systems.

Pallid Sturgeon
The Pallid Sturgeon is currently listed as "At High Risk" in Montana due to extremely limited and/or rapidly declining population numbers, range and/or habitat, making it highly vulnerable to global extinction or extirpation in the state. The pallid sturgeon is one of the rarest fishes in North America and was federally listed as endangered in 1990. The Pallid Sturgeon has been declining during at least the past 50 years with only about 200 adults remaining in the upper Missouri River and limited natural reproduction.

Northern Myotis
In Montana, this species in known to occupy riparian forest habitat within a limited range along the Missouri and Yellowstone Rivers near the North Dakota border. Populations of this species in the eastern US have undergone catastrophic declines due to White-Nose Syndrome, a fungal disease of bats. Although WNS is not known to be present in Montana, its eventual spread to the state presents a substantial threat to the persistence of this species.

Determination: The major land use at the project site has been municipal uses associated with a county fairground. This groundwater development is not expected to have significant impacts on endangered or threatened wildlife species.

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

According to the National Wetlands Inventory website, there are no wetlands in or near the proposed place of use and point of diversion.

Determination: This groundwater development is not expected to have significant impacts.

Ponds *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: Not applicable.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

According to the USDA Web Soil Survey, the soils within the county fairground are predominantly Trembles fine sandy loam, and Banks loamy find sand. The Trembles unit consists of deep, well-drained sandy loam to loamy sand on flood-plain steps with 0 to 2 percent slope. Runoff class is very low with occasional potential for flooding. This soil is classified as

nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm). The Banks unit consists of deep, well-drained loamy fine sand on flood-plain terrace with 0 to 4 percent slope. This soil is classified as nonsaline to slightly saline (0.0 to 4.0 mmhos/cm). As the fairground is already used by the public, no additional degradation to soil quality, stability or moisture content is anticipated.

Determination: This groundwater development is not expected to have significant impacts.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

There are no plant species listed as endangered or threaten in Richland County. The 10 acres proposed for irrigation are grass fields already used by the public at the fairground. The Applicant proposes to irrigate at night only, which will help conserve water while establishing grass roots. The rest of the project site is for truck traffic--filling up at the water barrels and heading out countywide for road maintenance, weed spraying, and fire control.

Determination: This groundwater development is not expected to have significant impacts.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

A normal amount of dust is expected from the truck traffic heading in and out of the fairground. However, it should not present a risk to vegetation or animals. Irrigated grass will improve vegetation cover and reduce soil erosion by wind, thereby improving air quality during the growing season.

Determination: This groundwater development is not expected to have significant impacts.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

***Determination*:** NA--Project not located on State or Federal Lands.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No additional impacts on other environmental resources were identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: There are no known local environmental plans or goals in the area.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: The project is located at a county fairground that has historically been used for public purposes. It will not have a negative impact on recreation or wilderness activities.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: This project will have no impact on human health.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X** If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights*.

Determination: There are no governmental regulatory impacts on private property rights associated with this application.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No significant impact

(*b)* *Local and state tax base and tax revenues?* No significant impact

(c) *Existing land uses?* No significant impact

(*d)* *Quantity and distribution of employment?* No significant impact

(e) *Distribution and density of population and housing?* No significant impact

(f) *Demands for government services?* No significant impact

(g) *Industrial and commercial activity?* No significant impact

(h) *Utilities?* No significant impact

(i) *Transportation?* No significant impact

(j) *Safety?* No significant impact

(k) *Other appropriate social and economic circumstances?* No significant impact

2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: This assessment does not indicate possible secondary impacts on the physical environment and/or the local human population.

Cumulative Impacts: This assessment does not indicate possible cumulative impacts on the physical environment and/or the local human population.

3. ***Describe any mitigation/stipulation measures:*** N/A

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** An alternative analysis of the project identifies a no-action alternative to the County's using groundwater permit for municipal purposes. This no-action alternative would not incur any direct impacts that are typically associated with pumping groundwater. Under the no-action alternative, the Applicant would continue to use city-supplied water for lawn irrigation, road maintenance, weed spraying and the fire department.

PART III. Conclusion

1. ***Preferred Alternative:*** Issue a water use permit if the Applicants prove the criteria in §85-2-311, MCA are met.

2 Comments and Responses

4. ***Finding:***
*Yes___ No_**X**_ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: No significant impacts have been identified; therefore, an EIS is not necessary.

Name of person(s) responsible for preparation of EA:

Name: Lih-An Yang
Title: Water Resource Specialist
Date: August 3, 2023